- Apparatus for membrane separation of wastewater from food industries
 - L20 ANSWER 48 OF 121 HCA COPYRIGHT 2002 ACS
 - AN 109:98246 HCA
 - IN Imasaka, Takao; Kanekuni, Nobuhiko; Wajima, Naohito; Yoshino, Shiqeru
 - PA Toto Ltd., Japan
 - SO Jpn. Kokai Tokkyo Koho, 6 pp. CODEN: JKXXAF
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AB In reverse osmosis or ultrafiltration of title wastewater, the gas-contg. feed stream is preferably mixed with solid particles (e.g., ion-exchange resins or sand), and the three-phase mixt. from a head tank is then downwardly passed through a pipe, pressurized with air or N in a gas-liq. mixer, and permeating through

.gtoreq.1 hollow-fiber membrane modules to obtain clean water. The waste stream from the membrane modules is pumped and upwardly introduced into the head tank. The ion-exchange resin particles are preferably made of polymethyl methacrylate; the hollow-fiber membrane is made of alumina ceramic and has an av. pore diam. of .apprx.0.42 .mu.m and a porosity of .apprx.47%. The scale deposited on the membrane surface can be significantly prevented.